



UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/940,988	08/28/2001	Michio Kadota	36856.541	7402
7590	12/23/2003		EXAMINER KIM, PAUL D	
Keating & Bennett LLP Suite 312 10400 Eaton Place Fairfax, VA 22030			ART UNIT 3729	PAPER NUMBER

DATE MAILED: 12/23/2003

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/940,988

Applicant(s)

KADOTA ET AL.

Examiner

Paul D Kim

Art Unit

3729

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 10 October 2003.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-7 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-7 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. §§ 119 and 120

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.
- 13) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application) since a specific reference was included in the first sentence of the specification or in an Application Data Sheet. 37 CFR 1.78.
- a) ☐ The translation of the foreign language provisional application has been received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121 since a specific reference was included in the first sentence of the specification or in an Application Data Sheet. 37 CFR 1.78.

Attachment(s)

- 1) ☐ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449) Paper No(s) _____
- 4) ☐ Interview Summary (PTO-413) Paper No(s). _____
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: _____

DETAILED ACTION

1. This office action is a response to the amendment filed on 10/10/2003.

Claim Objections

2. Claims 2-7 objected to because of the following informalities: The phrase "A method" in line 1 should be changed to --The method--. Appropriate correction is required.

Claim Rejections - 35 USC § 112

3. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

4. Claims 1-7 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

Re. Claim 1: the phrase "cutting the piezoelectric substrate... frequency characteristic" recited in lines 10-20 renders the claim vague and indefinite. According to the limitation "the edge reflection type surface acoustic wave device having a pair of edges of the piezoelectric substrate which define a predetermined distance therebetween" recited in lines 6-9, the predetermined distance is a length between the pair of edges of the piezoelectric substrate (see also Fig. 1 of the present invention). Examiner assumes that the piezoelectric substrate having the pair of edges can be cut shorter than the predetermined distance. It is, however, unclear as to how possible the

piezoelectric substrate having the pair of edges can be cut longer than the predetermined distance, which is already defined as the length between the pair of edges of the piezoelectric substrate.

Claim Rejections - 35 USC § 102

5. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

6. Claims 1, 4 and 5 are, as best understood in view of the rejections under 112 second paragraphs, rejected under 35 U.S.C. 102(e) as being anticipated by Kadota et al. (US PAT. 5,977,686).

The applied reference has a common assignee and inventors with the instant application. Based upon the earlier effective U.S. filing date of the reference, it constitutes prior art under 35 U.S.C. 102(e). This rejection under 35 U.S.C. 102(e) might be overcome either by a showing under 37 CFR 1.132 that any invention disclosed but not claimed in the reference was derived from the inventor of this application and is thus not the invention "by another," or by an appropriate showing under 37 CFR 1.131.

Kadota et al. teach a method of adjusting a surface acoustic wave device comprising steps of: determining a frequency characteristic of the edge reflection type surface acoustic wave device having a pair of edges (2a,2b) of the piezoelectric substrate which defined a predetermined distance (D') therebetween as shown in Fig. 1; cutting the piezoelectric substrate at least one of a pair of positions which define a distance that is shorter than the predetermined distance; and cutting the piezoelectric substrate at least one of a pair of positions which define a distance that is longer than the predetermined distance (col. 8, line 1-11).

As per claim 4 Kadota et al. also teach that the edge reflection type surface acoustic wave device comprises a single electrode type interdigital transducer as shown in Fig. 1.

As per claim 5 Kadota et al. also teach that the positions of the predetermined distance are located at approximate centers of the electrodes as shown in Fig. 1.

Claim Rejections - 35 USC § 103

7. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Art Unit: 3729

8. Claims 2-3 and 6 are, as best understood in view of the rejections under 112 second paragraphs, rejected under 35 U.S.C. 103(a) as being unpatentable over Kadota et al. in view of Kadota et al. (US PAT. 5,802,685).

Kadota et al. '686 teach all of the limitations as set forth above except a cutting process of shifting from the positions of the edges by $\lambda/8$ or $\lambda/16$. Kadota et al. '685 teach a method of adjusting a surface acoustic wave device including a process of cutting the piezoelectric substrate within a range of $\lambda/8$, or more preferably $3\lambda/32$ from the outer edge of the first and second electrode fingers as shown in Fig. 5 (col. 6, lines 44-49) for preventing chipping in the piezoelectric substrate during the cutting process. Therefore, it would also have been obvious at the time the invention was made to a person having ordinary skill in the art to modify a cutting process of Kadota et al. '686 by a process of cutting the piezoelectric substrate within a range of $\lambda/8$ as taught by Kadota et al. '685 for the purpose of preventing chipping in the piezoelectric substrate during the cutting process.

As per claim 6 Kadota et al. '685 also teach that the edge reflection type surface acoustic wave device comprises one or more electrode fingers (col. 2, lines 56-58).

Allowable Subject Matter

9. Claim 7 would be allowable if rewritten to overcome the rejection(s) under 35 U.S.C. 112, second paragraph, set forth in this Office action and to include all of the limitations of the base claim and any intervening claims.

Response to Arguments

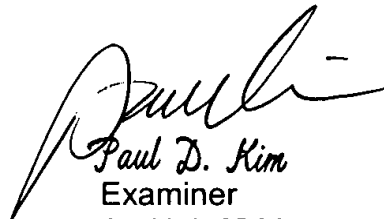
10. Applicant's arguments with respect to claims 1-7 have been considered but are moot in view of the new ground(s) of rejection. Rejections are based on the under 112 second paragraphs as set forth above.

Conclusion

11. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Paul D Kim whose telephone number is 703-308-8356. The examiner can normally be reached on Tuesday-Friday between 8:00 AM to 5:30 PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Peter Vo can be reached on 703-308-1789. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is 703-306-5648.


Paul D. Kim
Examiner
Art Unit 3729